ANIMAL HEALTH MONITORING AND SURVEILLANCE

PROGRAM PROFILE

Goal

To enhance the quality, safety, and competitiveness of U.S. food animal products by: (1) protecting and monitoring the health of the nation's livestock and poultry, (2) maintaining the capability to detect and assess disease and control or eradicate FAD's in a cost-effective manner, (3) monitoring animal diseases of economic importance and assisting the livestock industry in controlling or eradicating domestic diseases, (4) responding to inquiries from foreign countries on pests and diseases not covered by any individual budget line item, and (5) protecting the poultry industry from losses due to diseases and improve poultry and poultry products through the control of these diseases.

Enabling Legislation

7 USC 147; PL 78-425. 7 USC 429; 1944 Organic Act. 21 USC 114; 1884 Animal Ind. Act. 21 USC 134;PL 87-518. 7 USC 3801; 1980 SHP Act.

Economic Significance

Animal diseases increase costs to producers, consumers, and governments. Production yields drop and export markets can be lost. Livestock and poultry disease costs represent over $2 billion in preventable losses, but could be catastrophic if a FAD enters the United States. FMD could cost $12 billion over 15 years and African swine fever would cost $300-600 million to eradicate and it can kill entire herds. Destruction of infected animals is the best known method of effectively coping with these diseases. Annual export loss due to bluetongue has cost as much as $125 million annually and annual loss estimates due to mycoplasmosis are $150 million. The U.S. cattle industry is valued at $40 billion per year, the U.S. dairy industry is valued $19 billion, and the value of U.S. sheep industry is $500 million. Endemic Velogenic Viscerotrogic Newcastle Disease (VVND) would cost the $17 billion U.S. poultry industry over $600 million per year. The 1983-84 avian influenza outbreak cost producers $72 million in losses and cost APHIS $64 million to control. The swine industry, which has a production value of $11 billion, generates $66 billion of economic output and 764,000 jobs each year, providing $23 billion in personal income.

Principal Approach and Methods Used to Achieve Goals	The program emphasizes prevention and early detection through surveillance and is developing a coordinated, integrated national monitoring and surveillance system. The program interprets and disseminates information on animal health, productivity, and disease risk gained through animal health monitoring, disease trend surveillance, epidemiological analyses, and risk assessment. The program provides scientifically sound and statistically valid data on the incidence, trends, and impact of animal diseases. The program compiles diagnostic reports to monitor disease trends and shares information about new techniques. The program conducts surveillance programs to rapidly detect FAD introductions and develops procedures for containing and eliminating outbreaks. One surveillance tool APHIS uses to identify trends in swine and cattle disease agents is the Veterinary Diagnostic Laboratory Reporting System, which develops diagnostic reports from State veterinary laboratories. Methods include surveys, epidemiologic studies, prevention, and quarantine. Quarantine includes observation of all avian species entering the country. Additional activities include support of inspections of garbage feeding facilities, and surveillance for Classical Swine Fever.
History	This line item was established in FY 1994. It combines the surveillance portions of the brucellosis, pseudorabies, and tuberculosis programs with the Animal Disease Detection, NPIP, poultry diseases, SHP, and the miscellaneous animal diseases programs. The line item ensures that disease surveillance and detection, emergency disease preparedness and response, animal health monitoring, and epidemiologic delivery will continue after major animal disease eradication programs are completed. In FY 1998, funds were included by Congress to draft and enforce regulations for a humane slaughter horse program. In FY 2000, funds were included to begin a Johne's disease control and certification program.
State and Local Cooperation	Cooperative Federal-State-industry-university program. State and industry cooperation is intensified in emergencies.

Involvement of Other Agencies FSIS, ERS, ARS, Customs, NASS, DOD, HHS, CDC, FDA, State universities and agriculture departments, Ext. Service, & FWS.

RESOURCE DATA

	Obligations			
	Direct	Reimbursement	User Fees	Staff-Years
FY 1997	60,377,986	--	--	649
FY 1998	60,659,295	--	--	651
FY 1999	61,951,650	--	--	663
FY 2000 (est.)	65,943,000	--	--	670
FY 2001 (est.)	69,501,000	--	--	683

	APHIS	Coop	Total	CCC	Contingency Fund
Cum.	$363,011,468	$659,631,849	$1,022,643,317	--	$446,207

RECENT ACCOMPLISHMENTS

Foreign Animal Disease Investigations (FADs) In FY 1999, APHIS conducted 336 investigations for suspected FADs. The investigations were broken down into the following categories: vesicular conditions (230); mucosal conditions (8); avian diseases (13); respiratory conditions (6); encephalic conditions (24); excess death (11); myiasis/ascariasis (5); and other disease conditions (39).

Training Courses Also in FY 1999, APHIS coordinated 3 new training courses that focused on emergency management and the external partnerships that are developing between agencies such as the Federal Emergency Management Agency (FEMA) and similar State organizations. These courses opened dialogue and made us aware of potential additional resources in the event of an animal health emergency.

Natural Disaster Assistance APHIS coordinated an external relief effort to animal agriculture in North Carolina during Hurricane Floyd. This effort included sending disposal teams to find environmentally safe methods of disposing thousands of bloated swine and poultry carcasses. An interagency coordination was developed from our newly formed partnership with FEMA and its State counter-part.

West Nile Virus

In FY 1999, APHIS became involved with an occurrence of West Nile virus, never before documented in the Western Hemisphere. Found in Connecticut, Maryland, New Jersey, and New York, this disease severely affects humans, wild birds, and horses. We coordinated efforts with the Centers for Disease Control (CDC), U.S. Geological Survey, Southeastern Cooperative Wildlife Disease Study (SCWDS), local authorities (e.g. Brooklyn Zoo and New York City officials) and our own National Veterinary Services Laboratories (NVSL) to test potential cases in poultry and equines.

National Animal Health Monitoring System

APHIS continued to analyze on-farm data and biologic sample collections for Beef '97 (National Beef Cow/Calf Monitoring). We published an Information Sheet in February 1999, titled "Bovine Leukosis Virus (BLV) in U.S. Beef Cattle", an Information Sheet in August 1999, titled "Culling Practices in Beef Cow-Calf Operations", and an Information Sheet in August 1999, titled "What Do I Need to Know About Johne's Disease in Beef Cattle?" We analyzed 709 samples from 678 producers for determination of selenium and Vitamin E concentrations, evaluating each sample and bringing deficiencies or potential toxicites to the attention of the producers. A Report entitled "Forage Analyses from Cow/Calf Herds in 23 States" was issued in April 1999. This study proactively collected and interpreted data supporting U.S. trade; emerging disease conditions; disease control; industry quality assurance; emergency preparedness; production efficiency; and trends in animal health.

The NAHMS Equine '98 Study provided both participants and the industry with information on the nation's equine population for education and research. NAHMS released Part III and Part IV in the series of reports summarizing results of the study. "Part III: Management and Health of Horses, 1998," which was released in January 1999, focused specifically on horses in the US, presenting information on facility and stall management, and care and health issues. "Part IV: Reference of Health Management for Horses and Highlighted Diseases, 1998, was distributed to approximately 4,000 customers in May 1999, and posted to the World Wide Web.

We conducted the NAHMS Layers '99 Study. The USDA's National Agricultural Statistics Service (NASS) began collecting data from 208 single and multiple-farm companies via a questionnaire during February 1999. These single and

multiple-farm companies represented Alabama, Arkansas, California, Florida, Georgia, Indiana, Iowa, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Pennsylvania, Texas, and Washington. A highlight Information Sheet and "Part 1: Reference of 1999 Table Egg Layer Management in the U.S." was released in October 1999. On farm biologic sample collection continued through September 1999.

The Feedlot '99 study is NAHMS' second national study of the beef feedlot industry. The Feedlot '99 study began in August with NASS contacting 1,250 eligible participants from 12 states to collect preliminary management data. This first phase of data collection ended in September. The states involved in this study include Arizona, California, Colorado, Idaho, Iowa, Kansas, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Washington.

National Poultry Improvement Plan (NPIP)

The NPIP added a U.S. Avian Influenza (AI) Clean classification for primary egg- and meat-type chicken breeding flocks. The agar gel immunodiffusion test and the enzyme linked immunosobent assay were both approved as official tests for the AI classification. This program was added to keep the People's Republic of China and the Mexican government from imposing unrealistic testing requirements for AI on both commercial and breeding stock.

No commercial egg- and meat-type chicken or turkey breeding flocks had Salmonella pullorum or S. gallinarum isolates. S. enteritidis was found in 1 egg-type breeding flocks of approximately 8,000 birds each; these flocks lost their classifications and were depopulated. All hatching eggs from these flocks that were in incubators were destroyed. All hatching eggs from these flocks that had not been set in incubators were diverted for pasteurization.

No isolates of Mycoplasma meleagridis were found in primary turkey breeding flocks. However, there were 2 multiplier turkey breeding flocks positive for M. meleagridis in FY 1999 and 3 turkey multiplier breeding flocks, and 7 meat- and 2 egg-type chicken multiplier breeding flocks positive for M. gallisepticum. In addition, there were 10 egg- and 17 meat-type chicken multiplier breeding flocks positive for M. synoviae.

Miscellaneous Diseases

From October to November 1998, APHIS conducted the annual bluetongue survey of cattle in 18 north central and northeastern

States comprising 10 geographic areas. APHIS assessed Indiana, Michigan, Minnesota, New York, North Dakota, and Wisconsin. APHIS also assessed areas which consisted of more than one state including New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont) and combinations of Maryland/Delaware, Ohio/West Virginia, and Pennsylvania/New Jersey. Of the 6,595 slaughter samples tested in FY 1999, 44 were positive. APHIS continued to participate with industry representatives and members of the scientific community to develop the framework for a voluntary bovine leukosis-free herd certification program. The State-Federal cooperative Equine infectious anemia (EIA) monitoring system revealed that in FY 1999, of the 1,606,072 horses tested, 965 were infected with EIA.

Poultry Diseases

In FY 1999, APHIS tested 3,679 specimens from live-bird markets in eight states including Connecticut, Delaware, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Maryland. This represents a 32 percent increase from FY 1998 sampling level. The majority of specimens (2,982) were collected from New York. APHIS also detected 115 submissions from domestic sources other than live-bird markets. These submissions were from Arkansas, California, Delaware, Florida, Iowa, Michigan, North Carolina, New Jersey, New York, Ohio, Pennsylvania, Texas, Virginia, Washington, and Wisconsin.

Swine Health Protection

APHIS continued to monitor swine garbage feeding operations for the presence of foreign animal diseases. State and Federal inspectors conducted 6,942 inspections of licensed garbage feeding premises and 24,169 searches for unlicensed garbage feeders. These inspections and searches resulted in 182 documented violations.

Tuberculosis

APHIS continued to monitor the incidence of tuberculosis throughout the United States. The Agency tested 958 tuberculosis suspect tissues submitted by meat inspection personnel from slaughtered cattle in FY 1999. These included 398 were adult cattle and 560 being immature feedlot cattle. We completed 64 feedlot traceback investigations. We traced 11 (17 percent) back to Mexico. Generally, we are unable to trace these back any further than the feedlot, because of the extreme difficulty in identifying the animal's source of origin beyond that point.